

**Bellwork: 12/11/12**

**Factor the expression COMPLETELY!**

$$\begin{aligned} & 32x^2 + 40x - 12 \\ & 4(8x^2 + 10x - 3) \\ & (8x^2 - 2x)(12x - 3) \\ & 2x(4x - 1) + 3(4x - 1) \\ & 4(4x - 1)(2x + 3) \end{aligned}$$

-24
-1   24
-2   12
-3   8
-4   6

$$\begin{aligned} & -384 \\ & -8 \wedge 48 \end{aligned}$$
$$\begin{aligned} & (16x - 4)(2x + 3) \\ & (4x - 1)(8x + 12) \\ & 4(4x - 1)(2x + 3) \end{aligned}$$

Page 1

### **Factoring: Special Cases**

Two of the three special cases (the two that we are going to discuss in this chapter) involve perfect squares.

The two special cases that apply to quadratic functions are...

DIFFERENCE OF TWO SQUARES and

PERFECT SQUARE TRINOMIALS

→ factor using  $a \times c$  rewrite  $b$

Page 2

### Difference of two squares (DOTS)

examples:

1)  $x^2 - 4$

$$(x+2)(x-2)$$

$$x^2 + 0x - 4$$

2)  $x^2 - 16$

$$(x+4)(x-4)$$

3)  $4x^2 - 9$

$$(2x+3)(2x-3)$$

4)  $25x^2 - 16$

$$(5x+4)(5x-4)$$

5)  $2x^2 - 98$

$$2(x^2 - 49)$$

$$2(x+7)(x-7)$$

6)  $4x^4 - 64$

$$4(x^4 - 16)$$

$$4(x^2 + 4)(x^2 - 4)$$

$$4(x^2 + 4)(x+2)(x-2)$$

Homework: pg 221 -222 #47-54 and 58-61

[www.pearsonsuccessnet.com](http://www.pearsonsuccessnet.com)

